Inorganic and Organic Chemistry

BIOACTIVITY AND CHEMICAL ANALYSIS OF *Erythroxylum brevipes* and *Mikania sp.*

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Erythoxylum brevipes and *Mikania sp.* are two plants from the Dominican Republic. *E. brevipes* has been studied in cancer research for its tropane alkaloids, but its only ethnobotanical use in the Dominican Republic is as a broom. *Mikania sp.* comes from a genus of plants known for their medicinal uses. The purpose of this project was to investigate other possible bioactivity and significant chemical compounds. Non-polar and polar extracts were prepared for each plant. Thin layer chromatography analysis showed *E. brevipes* contained alkaloids and terpenes; *Mikania sp*. contained sesquiterpene lactones and amino acids. The extracts were tested against six bacteria: gram positive - Bacillus cereus, Mycobacterium phlei, Staphylococcus saprophyticus and gram negative - Escherichia coli, Pseudomonas aeruginosa, Proteus vulgaris. The *E. brevipes* non-polar extract showed no activity against any of the bacteria. The *E. brevipes* polar and both *Mikania sp.* extracts showed activity against all six bacteria. All extracts prohibited growth of lettuce seeds in a herbicidal bioassay.